REMARKS/ARGUMENTS

Claims 1-21 stand variously rejected in the outstanding Official Action. Claims 1-21 have been cancelled without prejudice and newly written claims 22-42 offered for consideration. Therefore, claims 22-42 are the only claims remaining in this application.

The Examiner's acknowledgment of applicants' claim for foreign priority is very much appreciated. However, it is noted that the Examiner, in the Office Action Summary Sheet, has failed to acknowledge that all copies of the priority document have been received in the national stage application from the International Bureau, i.e. properly marking Box 12(a)(3). In fact, the Examiner has suggested that "none" of the copies of the priority document have been received.

Applicants direct the Examiner's attention to the "Notification of Acceptance of Application Under 35 USC §371" mailed March 31, 2000 in the present case. In the third box up from the bottom of the page, the phrase "priority document" has an "X" beside it indicating that "the following items have been received" by the U.S. PTO. As a result, the Patent Office has received a copy of the priority document and under the PCT Treaty, that is all that is required to perfect applicants' claim for priority. The correctness of this priority claim is most often indicated on the Office Action Summary Sheet by marking Box 12(a)(3) and the Examiner is respectfully requested to so mark any future Summary Sheet.

The Examiner objects to the specification, alleging that the Title is not descriptive. Applicants have amended the Title to recite that the subject matter of the invention is a thermally insensitive photodetector circuit. However, applicants are not wedded to this language and should the Examiner be of the opinion that other language would more properly describe the claimed invention, applicants will certainly consider any suggested alternative.

The Patent Office objects to the arrangement of the specification. It is also appreciated that the Examiner has brought the arrangement of the specification to the applicant's attention. It is noted that the objection to the arrangement appears to be an indication that the originally filed specification and drawings (transmitted from WIPO) do not meet the formality requirements of the U.S. Patent and Trademark Office. The Patent Office is reminded that the U.S. Patent and Trademark Office must comply with all articles of the Patent Cooperation Treaty (PCT) including Article 27. It has been held that:

"if the rule and interpretation of the PTO conflicts with the PCT, it runs afoul of Article 27 of the PCT which provides in part:

(1) No national law shall require compliance with requirements relating to the form or contents of the international application different from or additional to those which are provided for in this Treaty and the Regulations." Caterpillar Tractor v. Commissioner, 231 USPQ 590, 591 (EDVA 1986).

The Patent Office has referenced this decision in the Official Gazette dated September 9, 1986 (1070 TMOG 5).

As a consequence, the Patent Office (including the Chief Draftsman's Office) may not require Abstract changes, specification format changes and/or drawing corrections (including changes in paper size, margins, etc.) as long as the originally submitted documents comply with the PCT requirements. Inasmuch as this specification and these drawings were forwarded for WIPO, by definition, they meet the PCT requirements (they are not forwarded until they meet PCT requirements.). Therefore, the objection to the specification is respectfully traversed and reconsideration thereof is respectfully requested.

Notwithstanding the above, applicant has added headings and subheadings to the specification.

Former claims 1-21 stood rejected over applicants' previously disclosed prior art, either by itself or in combination with Tanaka (U.S. Patent 5,965,892). In applicants' newly written claims, applicants positively recite in independent claim 22 and elsewhere that the phototransistor provides a gain "sufficiently high that the illumination dependent contribution to the output signal exceeds the leakage current contribution." As disclosed in applicants' specification, the benefit of such arrangement is that the circuit is substantially temperature insensitive, and this desirable benefit has been added to the preamble of the independent claim 22.

As a result, in order to anticipate or render obvious newly written claims 22-42, it is incumbent upon the Examiner to demonstrate how or where the prior art, either applicants' admitted prior art or prior art cited by the PTO, shows or suggests a

phototransistor with the gain specified in independent claim 22, i.e. high enough that the "illumination dependent contribution to the output signal exceeds the leakage current contribution."

While applicants' specification at page 1, lines 30 and 31 discloses "Mead," it is clear that a copy of the reference would be helpful to the Patent Office's understanding. Applicants enclose a copy of this reference, along with two citations from applicants' UK search in a separate Information Disclosure Statement and requests that these be made of record in this application.

A review of the Mead reference will show that it does disclose a phototransistor, but there's no mention of any characteristic where the gain is sufficiently high that "the illumination dependent contribution to the output signal exceeds the leakage current contribution." Should the Examiner believe that Mead discloses anything more than a phototransistor with gain, he is respectfully requested to point out where or how he believes Mead teaches applicants' claimed phototransistor having a "gain sufficiently high that the illumination dependent contribution to the output signal exceeds the leakage current contribution." Finally, it is noted that Mead does not mention leakage current or its deleterious effects, so that being unaware of the problems solved by applicants' invention, it cannot render obvious the solution to those problems.

It is respectfully requested that the Examiner review applicants' newly submitted claims 22-42 and point out how or where he or she believes that the subject matter recited therein is disclosed or rendered obvious in either Mead or any other prior art reference.

In combining the Mead reference with the Tanaka reference, the Examiner alleges that Mead does not expressly disclose a fabrication process. This is in fact incorrect, as on page 219, lines 2-6, Mead states that "[b]ipolar transistor structures are a natural byproduct of the bulk CMOS process . . . They are usually considered to be a parasitic device . . . They are, however, excellent photodetectors." Thus, Mead is stating that normal CMOS parasitic transistors are excellent, so that there is no point in looking for anything else. Mead in effect actively discourages any search for an alternative.

However, applicants found that CMOS parasitic transistors are too large and are ill-matched, making them unsuitable for photodetector circuit arrays in particular. Absent the hindsight afforded by applicants' invention, there is no teaching or motivation in Mead to seek any alternative process such as BiCMOS. Finally, even if there were a reason to seek an alternative process, Tanaka does not describe phototransistors, but instead teaches thermo-electric detectors (column 8, line 47).

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that claims 22-42 are in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, he is respectfully requested to contact applicants' undersigned representative.

Respectfully submitted,

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